

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

ERIE COUNTY ENVIRONMENTAL
COALITION, PENNENVIRONMENT,
INC. and THE GAIA DEFENSE LEAGUE,
Plaintiffs

V.

MILLCREEK TOWNSHIP SEWER
AUTHORITY AND MILLCREEK
TOWNSHIP,
Defendants

CIVIL ACTION NO. 05-59 ERIE
ELECTRONICALLY FILED

JUDGE COHILL

AFFIDAVIT OF GERALD C. ALLENDER

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF ERIE)

I, GERALD C. ALLENDER, first being duly sworn on oath and under penalty of perjury,
hereby states as follows:

1. I am currently the Business Unit Leader of the Erie office for Metcalf & Eddy/AECOM, which formerly was Consoer Townsend Envirodyne Engineers/AECOM.

2. I have worked for the last 40-plus years on issues involving sanitary sewers. I am a Registered Professional Engineer in the State of Pennsylvania. I have a Master's Degree in Sanitary Engineering from Penn State University. I worked for the Pennsylvania Department of Environmental Protection (then known as the Pennsylvania Department of Environmental

Resources) ("Department") for approximately six years as Chief of Planning, Operations and Facilities in three different regional offices, including the Northwest Regional Office, which oversees Erie County, Pennsylvania. I also worked as the Director of Sanitary Engineering for the Erie County Department of Health for five years. For the last 30 years, I worked in private practice for Consoer Townsend Envirodyne Engineers/AECOM ("CTE"), which is now Metcalf & Eddy/AECOM. In my years of private practice, I have worked on sewer collection and treatment for numerous municipal clients, including the Millcreek Township Sewer Authority ("MTSA") and the City of Erie Sewer Authority. I have performed work on behalf of MTSA since the mid-1980s, and am familiar with both the operation of the Millcreek sewer system and the operators of the Millcreek sewer system from the mid-1980s to the present.

3. With respect to the managers of the MTSA, prior to Mr. Riedesel, David Wright served as acting manager from January 1998 - June 1998. Prior to Mr. Wright, Bruce Yount served as manager. He served in that capacity from September 1996 until his untimely death in January 1998. Mr. Yount was previously the Chief, Bureau of Sewers for the City of Erie. Prior to Mr. Yount, Max Gill was the manager of MTSA. He was in that position for over 18 years, and was the manager of MTSA at the time the Kearsarge force main overflow was installed.

4. The Millcreek sewer system feeds into the City of Erie sewer system at several locations. A true and correct copy of a drawing that shows the major locations where the Millcreek sewer system feeds into the Erie system is included in the Appendix to Motion for Summary Judgment at App. 68. Of relevance to the claims raised by the Plaintiffs in this action, the wastewater from areas of Millcreek Township served by the Kearsarge pump station is now transported to the City of Erie's system through the Pittsburgh Avenue/Manor sewer (previously Ellsworth) and then is transported to the City's wastewater treatment plant by the Westside

Interceptor. A true and correct copy of a drawing that shows the sewer lines fed by the Kearsarge pump station is included in the Appendix to Motion for Summary Judgment at App. 87. The sewer line immediately leaving the pump station (and marked FM on the drawing) and connecting to the Pittsburgh Avenue sewer line at 38th Street is what is called a force main. A force main uses pressure created by pumps to transport wastewater through a pipe. The force main feeds into what is called a gravity main on Pittsburgh Avenue. A gravity main relies on the forces of gravity to transport wastewater through a pipe. The remainder of the sewer lines that transport the wastewater from the Kearsarge pump station are gravity mains.

5. In addition to areas of Millcreek Township, the Kearsarge pump station is fed by sewer lines that serve areas of Summit Township. The Millcreek sewer lines that directly feed the Kearsarge pump station are all gravity sewer lines. With respect to Summit Township, the Kearsarge pump station serves the upper Peach Street area of Summit Township, primarily populated by shopping areas with residential and business areas south of that shopping district. The Summit Township sewer lines are a mix of gravity fed and force mains. True and correct copies of two drawings showing the sewer lines that feed into the Kearsarge pump station from both Millcreek Township (Figure VII-b) and Summit Township (Figure VII-a) are included in the Appendix to Motion for Summary Judgment at App. 88 and 89.

6. The Millcreek sewer system, therefore, is in the middle of the regional sewer system that is ultimately served by the City of Erie wastewater treatment plant. To the north, which is downstream, the Kearsarge pump station capacity is subject to the capacity limitations imposed by the City of Erie sewer system. To the south, which is upstream, the Kearsarge pump station is subject to the future flow possibilities of Summit Township.

7. The Kearsarge pump station itself was constructed in the mid-1950s. At that time, there was a gravity fed overflow built into the station to handle overflow situations during severe storm events. It was standard practice to include overflows at pump stations to protect against damage to the system and its customers under severe operating conditions. The pump station was then upgraded in the mid-1980s due to increasing development of Millcreek Township and Summit Township in the areas served by the Kearsarge pump station. The gravity overflow was plugged with concrete.

8. Investigations conducted in the early 1990s into the causes of the overflows at the Kearsarge pump station concluded that the Kearsarge pump station had sufficient pumping capacity during storm events, if its pump head was reduced. However, there was not enough transport capacity in both the Millcreek sewer system and the City of Erie sewer system downstream of the Kearsarge pump station. Accordingly, MTSA and Millcreek Township ("Millcreek") began to explore in 1991 how they could solve the capacity problems in its system. In March 1991, MTSA submitted to the Department a Task Activity Report for a proposed Special Study. A copy of the MTSA's letter and the Report, which the Erie office of CTE completed, is included in the Appendix to Motion for Summary Judgment at App. 92-98.

9. In this same time frame, the City of Erie was having capacity problems within its sewer system, in terms of both conveyance capacity and treatment capacity, and was investigating what it should do. The City of Erie entered into a Consent Order and Agreement with the Department to resolve those problems. The City of Erie has several combined sewer overflows that are allowed under its National Pollutant Discharge Elimination System ("NPDES") Permit.

10. In 1992, MTSA and Millcreek entered into a Consent Order and Agreement ("1992 COA") with the Department to address the overflow problem at the Kearsarge pump station as well as address capacity issues in other areas of the Millcreek sewer system. Under the 1992 COA, MTSA and Millcreek proposed two basic alternative solutions to the Kearsarge problem. A true and correct copy of MTSA's Alternative Selection and Implementation Schedule, Sewage Facilities Plan is included in the Appendix to Motion for Summary Judgment at App. 121 -159. First, MTSA and Millcreek proposed to construct a new sewer line directly from the Millcreek sewer system to the wastewater treatment plant, thereby bypassing most of the conveyance portion of the City of Erie sewer system.

11. Under the second alternative, MTSA and Millcreek would expand the capacity of its sewer lines downstream of the Kearsarge pump station, and would work with the City of Erie, in conjunction with the City's obligations under its Consent Order and Agreement, to expand the capacity of the City's sewer lines downstream of the Kearsarge pump station, and increase the capacity of the wastewater treatment plant to handle high wet weather flows. The Kearsarge pump station capacity was then to be increased. Under either scenario, it would take a substantial amount of time to solve the overflow problem and remove the Kearsarge overflow.

12. On March 11, 1993, the Department approved the alternative under which the MTSA, Millcreek and the City of Erie worked together on the regional solution. A true and correct copy of the Department's letter, on which I was copied, is included in the Appendix to Motion for Summary Judgment at App. 160 - 161.

13. Pursuant to the 1992 COA, MTSA, Millcreek and the City engaged in an eight-year period of sewer investigation, construction and repair, ranging from cleaning existing sewer lines, to constructing new sewer lines, to performing studies and abatement of inflow and

infiltration, to constructing a significant upgrade of the City's wastewater treatment plant. MTSA and Millcreek performed 22 projects during this period.

14. By the end of 2000, the capacity problem at the Kearsarge pump station was not solved. The planned upgrade could not be implemented. Thus, the removal of the overflow, which was the only project remaining to be completed under the 1992 COA could not be completed. It was determined that although the millions of dollars spent increased the capacity of the sewer system downstream of the Kearsarge pump station, there still was insufficient available capacity downstream of the Kearsarge pump station to accommodate the overflows volumes at the pump station. Essentially, the plan did not work. The wet weather flows that the Millcreek sewer system was receiving from other areas that fed into the same sewer line as the Kearsarge pump station proved to be much higher than the monitoring performed in the early-to mid-1990s established, and upon which many of the projects were based.

15. On October 31, 2003, MTSA, Millcreek and the Department entered into a Consent Order and Agreement ("2003 COA") which required MTSA and Millcreek to perform additional work to address the overflow problems at the Kearsarge pump station and to ultimately remove the overflow at the Kearsarge pump station. To date, MTSA and Millcreek have accomplished significant portions of their obligations under the 2003 COA.

16. Under the 2003 COA, MTSA and Millcreek were required to prepare a Special Study, which was intended to evaluate the alternatives available to solve the overflow issues at the Kearsarge pump station.

17. As required by the 2003 COA, on June 29, 2004, MTSA and Millcreek submitted the Special Study outlining its proposed solution and indicating that the work would be completed within 18 months after the Department issued the construction permit, and that the

overflow would be eliminated within 30 days after construction was completed, all of which was consistent with the 2003 COA. I was the primary author of the Special Study. The main component of the proposed solution was the construction of a tank with a capacity of at least 500,000 gallons. At the time of the Special Study, Millcreek was still evaluating the size of the tank, but it was expected to be at least 500,000 gallons. The Study also recommended use of a relief sewer for Zimmerly Road to resolve capacity issues with that sewer. The Study also recommended diverting flows from the Peach Street Interceptor (which is tributary to the 18" Beaver Run Interceptor) to resolve capacity issues in the Beaver Run Interceptor. This project is known as the Peach Street Diversion. A true and correct copy of Volume I of the Special Study is included in the Appendix to Motion for Summary Judgment at App. 186 - 413.

18. Pursuant to the Pennsylvania Clean Streams Law and regulations, on May 26, 2004, MTSA and Millcreek published a public notice of the Special Study in the Erie Times News to enable interested persons to make public comments. A true and correct copy of the May 26, 2004 public notice is included in the Appendix to Motion for Summary Judgment at App. 690. The Notice stated, "The purpose of this Special Study is to define the facilities necessary to provide capacity to eliminate existing and future station overflows." The Notice gave parties from May 26, 2006 to June 25, 2004 to submit comments. No member of the public, including anyone from the three Plaintiffs, submitted any public comments. The Special Study required by the Department under the 2003 COA ultimately constituted revisions to Millcreek Township's state-approved Act 537 Plan, and as such had to be publicly noticed.

19. Following the submission of the Special Study, the Millcreek Township area was hit with the remnants of a hurricane on September 9-10, 2004, which caused overflows at the Kearsarge pump station of volumes and duration that had never been experienced in the past. It

caused flooding throughout the region. The storm was estimated to be the equivalent of an approximate 50-year storm event. The size of the storage tank was determined using that storm event. As a result of those events, MTSA and Millcreek submitted an Act 537 Special Study Addendum to the Department on June 28, 2005. I was the primary author of the Special Study Addendum. In this Addendum, the size of the storage tank was increased to 2.3 million gallons. A true and correct copy of the Special Study Addendum is included in the Appendix to Motion for Summary Judgment at App. 542 - 599. It is believed that the 2.3 million gallon design for the overflow retention tank is quite conservative and contains a significant safety factor.

20. As part of the Special Study Addendum, MTSA and Millcreek again published a public notice for comments in the Erie Times-News on May 23, 2005. A true and correct copy of the May 23, 2005 public notice is included in the Appendix to Motion for Summary Judgment at App. 691. The public had from May 23, 2005 to June 22, 2005 to comment on the proposed changes. No member of the public, including anyone from the three Plaintiffs, submitted a public comment.

21. MTSA and Millcreek have made significant progress on the major project of the Special Study.

22. On June 28, 2005, in compliance with the schedule in the 2003 COA, MTSA and Millcreek submitted to the Department the permit application to construct the proposed storage tank solution and accompanying changes to the pump station. A true and correct copy of the cover letter accompanying the permit application is included in the Appendix to Motion for Summary Judgment at App. 603.

23. The design of proposed project has two main components. First, the existing pumps at the Kearsarge pump station will be replaced with pumps of greater capacity to pump

flows forward to the City of Erie sewer system. These pumps will have a capacity of 4,500 gpm. Second, MTSA and Millcreek will construct two overflow retention tanks that will have a combined capacity of 2.3 million gallons. When the flows at the Kearsarge pump station reach 4,500 gpm, any flows above 4,500 gpm will be diverted to the storage tanks. Once flows through the pump station fall below 4,500 gpm, the tanks will begin to feed back into the system to be transported forward to the City of Erie sewer system. Based upon my expertise and experience, it is my opinion that the proposed project will handle the overflow volumes at the Kearsarge pump station and enable MTSA and Millcreek to remove the overflow.

24. Due to a change in the tank configuration from one tank to two tanks, MTSA and Millcreek also submitted an amended permit application to the Department for this change on December 28, 2005. Also, on January 14, 2006, MTSA and Millcreek submitted an update to its Act 537 Plan to cover the new two-tank design to the Department. The permit amendment and planning approval were issued by the Department on March 1, 2006. The work is expected to begin this summer and be completed no later than the deadline under the 2003 COA.

25. With respect to the Zimmerly Road project recommended by the Special Study, by September 20, 2004, MTSA and Millcreek had completed the Zimmerly Road relief sewer, which addressed the cause of the overflows at the 51st and 52nd Streets and Zimmerly Road --- namely, the sewer line size was under capacity. The Special Study concluded that the Zimmerly Road line was a 10" sewer line that had a capacity of 0.65 MGD, but was receiving flows of 0.4 to 1.5 MGD during storm events. Further, the estimated future peak flow of that line was 1.72 MGD. Accordingly, the Zimmerly Road line was under capacity. The capacity problem in the Zimmerly Road line caused the need to discharge from the 51st and 52nd Streets and Zimmerly Road location in order to protect nearby homes from have sewer backups in their

basements. The proposed Zimmerly relief sewer, together with the existing Zimmerly Road line, provide a capacity of 2.07 MGD. Based upon the analysis in the Special Study, the new capacity of the overall Zimmerly Road sewer is sufficient to handle both the existing and projected peak flows into that sewer line. Since that time, the Zimmerly Road sewer has, in fact, had adequate capacity to handle both normal flows and peak flows, and there have been no instances of overflows associated with the 51st and 52nd Streets and Zimmerly Road location since the relief line became operational.

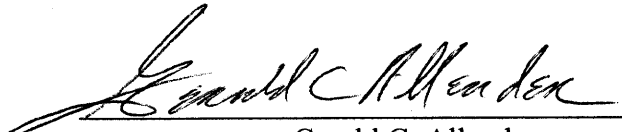
26. With respect to the Beaver Run Interceptor capacity problem, the capacity problem caused the need to discharge from both the Larchmont and Beaver Streets and the Church, Patton and Pershing locations in order to protect nearby homes from having sewer backups in their basements. The Special Study concluded that the Beaver Run Interceptor has a capacity of 4.3 MGD; however, during storm events the peak flows could be 5.8 MGD. Thus, the line would be under capacity by 1.5 MGD during those events. The Special Study proposed that the Peach Street Diversion be built to take flows of 1.2 MGD from the Beaver Run Interceptor to the Beaver Run relief sewer that has more than enough capacity to handle those flows.

27. In the interim and to ensure that no further discharges will occur at the two locations impacted by the lack of capacity of the Beaver Run Interceptor, MTSA and Millcreek has developed a system to shift flows from the Peach Street Interceptor to the Beaver Run relief sewer. This creates a temporary relief sewer for the 18" Beaver Run Interceptor until the Peach Street Diversion is constructed. MTSA and Millcreek accomplished this by acquiring a pump and hose system to pump from the Peach Street Interceptor during significant storm events to the Beaver Run relief sewer that has enough capacity to carry those flows. The pump is placed on

the Peach Street Interceptor in the area of the Millcreek Mall. This "over the surface" solution acts in the same fashion as the proposed Peach Street Diversion. Consequently, MTSA purchased a 6" pump, 60 feet of 6" flexible hose and made modifications to the Peach Street Interceptor to accept the suction line of the pump. The pump has the capacity to pump 2.0 MGD, which ensures that the Beaver Run Interceptor will not exceed its capacity and cause overflows at those two locations.

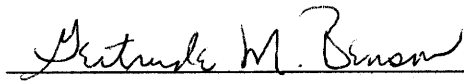
28. With respect to the Peach Street Diversion that ultimately will handle these flows, MTSA has received its permit from the Department, and the work for the Peach Street Diversion has been bid. Bids are to be received on April 18, 2006.

29. I was asked by MTSA and Millcreek to review issues relating to the claims raised by Plaintiffs in this case. A true and correct copy of the Expert Report that I have submitted in this case is included in the Appendix to Motion for Summary Judgment at App. 736 - 740.


Gerald C. Allender

Sworn to and subscribed before me

this 29th day of March, 2006.


Notary Public

